

WHAT IS CLAIMED IS:

1. An ultraviolet light irradiation apparatus for irradiating untreated water or other fluids, comprising:
a light transmission tube having an internal light irradiation lamp;
a scraper ring slidably and tightly fitted to the circumference surface of the light transmission tube;
said scraper ring having an internal cleaning solution chamber communicating with a chemical solution pipe; and
wherein said scraper ring is movably mounted so as to be reciprocally moved over the circumference surface of said light transmission tube to clean said light transmission tube.

2. The ultraviolet ray irradiation apparatus as claimed in claim 1, further comprising a sealing material fitted against the surface of said light transmission tube and adjacent to said cleaning solution chamber.

3. The ultraviolet ray irradiation apparatus as claimed in claim 2, wherein the sealing material is an O-ring.

4. The ultraviolet ray irradiation apparatus as claimed in claim 1, further comprising means for reciprocally sliding said scraper ring over the circumference surface of said light transmission tube.

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5. The ultraviolet ray irradiation apparatus as claimed in claim 4, wherein the means for reciprocally sliding comprises a moving frame fitted to a rotating screw stem installed externally to said light transmission tube, and a drive means for rotating said screw stem in normal and reverse order.

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6. The ultraviolet ray irradiation apparatus as claimed in claim 5, wherein the drive means is a motor.

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7. The ultraviolet ray irradiation apparatus as claimed in claim 2, further comprising means for reciprocally sliding said scraper ring over the circumference surface of said light transmission tube.

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8. The ultraviolet ray irradiation apparatus as claimed in claim 6, wherein the means for reciprocally sliding comprises a moving frame fitted to a rotating screw stem installed externally to said light transmission tube, and a drive means for rotating said screw stem in normal and reverse order.

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9. The ultraviolet ray irradiation apparatus as claimed in claim 7, wherein the drive means is a motor.

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10. The ultraviolet ray irradiation apparatus as claimed in claim 1, wherein the scraper ring is composed of an elastic material.

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- 2 11. The ultraviolet ray irradiation apparatus as claimed in claim 1, wherein the cleaning
3 solution chamber has an open annular configuration such that the opening portion is adjacent to the
surface of the light transmission tube.

- 1 12. The ultraviolet ray irradiation apparatus as claimed in claim ~~5~~⁴, wherein a plurality of
2 scraper rings are mounted to the frame and are reciprocated together with the frame.

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